WO 2005/065557 PCT/AU2005/000013

CLAIMS

5

10

15

25

35

1. A bone fixing device for fixing bone pieces together, the bone fixing device comprising:

a pair of spaced-apart fixing portions, each having at least one hole dimensioned such that a fastener can extend therethrough; and,

a pair of substantially rigid connecting members extending between the fixing portions, the connecting members being deformable without substantially losing rigidity,

whereby, in use, each fixing portion is fixed to one or more of the bone pieces by the fasteners such that the connecting members extend across one or more fissures between the bone pieces, and the connecting members are simultaneously deformed such that the fissures are closed with the bone pieces held in compression.

- A bone fixing device according to claim 1, wherein
 each fixing portion comprises an annulus.
 - 3. A bone fixing device according to claim 1, wherein the connecting members are deformable symmetrically with respect to a line extending through the centre of the pair of fixing portions such that the fixing portions are drawn toward one another along the line.
- A bone fixing device according to claim 3, wherein to achieve the symmetrical bending the connecting members
 are bent apart.
 - 5. A bone fixing device according to claim 3, wherein to achieve the symmetrical bending the connecting members are pinched together.
 - 6. A bone fixing device according to claim 1, wherein the connecting members are initially parallel.

WO 2005/065557 PCT/AU2005/000013

20

A bone fixing device according to claim 1, wherein 7. each connecting member has at least one point of weakness at which bending of the connecting member occurs in preference to elsewhere on the connecting member.

- 14 -

- A bone fixing device according to claim 7, wherein 8. each of the at least one point of weakness is a necked portion of the respective connecting member.
- 10 A bone fixing device according to claim 1, wherein at least one of the fixing portions comprises at least two holes each for receiving a fastener.
- A modular system for fixing bone pieces together, 15 10. the modular system comprising at least two bone fixing devices, each bone fixing device comprising:

a pair of spaced-apart fixing portions each having at least one hole dimensioned such that a fastener can extend therethrough; and,

a pair of substantially rigid connecting members extending between the fixing portions, the connecting members being deformable without losing rigidity,

whereby, in use, at least one of the fixing portions of each bone fixing device can be concentrically 25 overlapped with a fixing portions of another bone fixing device such that a fastener can extend through the holes of the overlapped fixing portions.

- A modular system according to claim 10, wherein the 30 11. fixing portion is in the form of an annulus.
- A modular system according to claim 11, further 12. comprising at least one washer for overlapping with an annulus of a bone fixing device. 35

WO 2005/065557 PCT/AU2005/000013

- 15 -

13. A modular system according to claim 12, wherein the hole within the at least one washer is frusto-conical in shape to receive the head of a bone screw.

- 5 14. A modular system according to claim 13, wherein the hole within the at least one washer is cylindrical in shape to receive the shaft of a bone screw.
- 15. A method of fixing bone pieces separated by a 10 fissure, comprising the steps of:

15

25

- (a) providing at least one bone fixing device having a pair of spaced-apart fixing portions each having at least one hole being dimensioned such that a fastener can extend therethrough and a pair of deformable connecting members extending between the fixing portions;
- (b) fixing one of the fixing portions to one bone piece using a fastener and the other fixing portion to another bone piece using another fastener such that the connecting members extend across the fissure; and,
- 20 (c) simultaneously deforming the connecting members such that the fixing portions are drawn together.
 - 16. A method according to claim 15, wherein the fixing portions each comprise an annulus, and step (a) involves overlapping an annulus of a first bone fixing device with an annulus of a second bone fixing device such that a fastening means can extend through both of a pair overlapped annuli.
- 30 17. A method according to claim 15, wherein simultaneously deforming the connecting members in step (c) further comprises substantially symmetrically deforming the connecting members.